

Ship 08 Aout

Work Order ID 164310

164310

Page 1

Item ID: D3168-041

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: Step Assembly, Low Short LH

Stop *NS2*

Start Date: 7/31/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 7/31/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date: JUL 17 2017 Tooling:

Date:

Run Start *NR1*

QC:

Date: SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr	Revision Nbr
D3168	B

110

0.00

110

Large Fab

Large Fab

Memo

0.17

Large Fab

1-Cut D2622-120C extrusion to 57.090" long as per Dwg D3168

2-Drill extrusion as per Dwg D3168 using Jig DT8680 for rivets.****(Use only 1st 6holes)****

3-Deburr

1x Dec 2017-07-18

120

QC6- All purchased or subcontracted products

0.00

120

QC

Memo

0.02

Quality Control

JUL 19 2017

DAS
24
9-89

H:/FORMS/Quality

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Work Order ID 164310

Monday, July 17, 2017 11:08:25 AM

164310

Page 2

Item ID: D3168-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Step Assembly, Low Short LH
Start Date: 7/31/2017 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 7/31/2017 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Large Fab Large Fab	Weld per dwg A/R Aluminum rod Batch: _____ Large Fab Memo 1-Bevel end for welding FWD ONLY 2-Weld Support and end plate using Jig DT8780, as per QSI 004 & Dwg D3168 A/R Aluminum Rod 137078 3- Grind end plate flush as per dwg	0.00 1.39				<u>1</u>	<u>JUL 19 2017</u>	<u>DAS</u> <u>24</u> <u>9-89</u>	
140 *140* QC Quality Control	QC9- Inspect visual per QSI004- Fusion Welds Memo	0.00 0.02				<u>①</u>	<u>17.07.20</u>	<u>DAS</u> <u>9</u> <u>9-89</u>	
150 *150* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.02				<u>①</u>	<u>17.07.20</u>	<u>DAS</u> <u>9</u> <u>9-89</u>	

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																						
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Work Order ID 164310

Monday, July 17, 2017 11:08:25 AM

164310

Page 3

Item ID: D3168-041

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Step Assembly, Low Short LH

Start Date: 7/31/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 7/31/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

Chemical Conversion Coat per QSI005 4.1

0.00

160

HandFinish

Memo

0.02

Hand Finishing

(X)

/

20170724

BETB.

170

QC7-Inspect Chemical Conversion Coat

0.00

170

QC

Memo

0.02

Quality Control

1

JUL 26 2017

DAS
24
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
705 2 3 101				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 164310

Monday, July 17, 2017 11:08:25 AM

164310

Page 4

Item ID: D3168-041 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Step Assembly, Low Short LH
 Start Date: 7/31/2017 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 7/31/2017 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 *180* Large Fab Large Fab	Weld per dwg A/R Aluminum rod Batch: _____ Large Fab Memo Rivet Leg Assembly as per Dwg D3168 1-Bevel end for welding 2-Inspect for foreign object as per QSI 024 3-Weld end plate as per QSI 004 & Dwg D3168 A/R Aluminum Rod 137078 4- Grind end plate flush as per dwg	0.00 0.54				1			DAS JUL 26 2017 24 9-89
190 *190* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.02				1			68-6 8E 3VQ JUL 26 2017

1x DO 2017-07-25

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
117-10								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
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Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
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Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Work Order ID 164310

Monday, July 17, 2017 11:08:25 AM

164310

Page 6

Item ID: D3168-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Step Assembly, Low Short LH
Start Date: 7/31/2017 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 7/31/2017 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230	QC3- Inspect Part Finish	0.00							
230									
QC	Memo	0.02							DAS 38 JUL 31 2017
Quality Control									
290	Identify as per dwg & Stock Location	0.00							
290	Packaging								
Packaging	Memo	0.02							JUL 31 2017
Packaging									
300	QC21- Final Inspection - Work Order Release	0.00							
300									
QC	Memo	0.10							17/8/2017
Quality Control									

DAS JUL 31 2017
21
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

Monday, July 17, 2017 11:08:36 AM

Page 1

Work Order ID: 164310

164310

Parent Item: D3168-041

D3168-041

Parent Item Name: Step Assembly, Low Short LH

Start Date: 7/31/2017

Required Date: 7/31/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 16.01.14 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3067-1 ✓ *D3067-1* End Plate		Manufactured	No			180	Each	153.0000	1	1			
										**	DC	2017-07-18	

Location

Loc Qty

Loc Code

WA003

153

159903

10

160540

103

163742

40

D2622-120C

Manufactured No

130

Each

46.0000

0.5

0.5

D2622-120C

Step Extrusion

**

DC

2017-07-18

Location

Loc Qty

Loc Code

WA003

46

152316

17.5

157441

28.5

D3067-1

Manufactured No

130

Each

153.0000

2

2

D3067-1

End Plate

**

DC

2017-07-25

Location

Loc Qty

Loc Code

WA003

153

159903

10

160540

103

163742

40

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By																	
Root Cause				FAULT CATEGORY																					
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : _____																			

Picklist Print

Monday, July 17, 2017 11:08:36 AM

Page 2

Work Order ID: 164310

164310

Parent Item: D3168-041

D3168-041

Parent Item Name: Step Assembly, Low Short LH

Start Date: 7/31/2017

Required Date: 7/31/2017

Start Qty: 1.00

Required Qty: 1.00

D3077-1 Manufactured No

180 Each 4.0000 2 2

D3077-1

Step Leg

**

DC 2017-07-25

Location

Loc Qty

Loc Code

WA003

4 B169323 → 2

151275

4

D3170-1 Manufactured No

180 Each 12.0000 2 2

D3170-1

Spacer

**

DC 2017-07-25

Location

Loc Qty

Loc Code

PKG

10 B163605 → 2

163605

10

WA003

2

120606

2

D3219-5 Manufactured No

180 Each 27.0000 2 2

D3219-5

Plate

**

DC 2017-07-18

Location

Loc Qty

Loc Code

WA003

27 B146687 → 2

146687

27

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

Monday, July 17, 2017 11:08:36 AM

Page 3

Work Order ID: 164310

164310

Parent Item: D3168-041

D3168-041

Parent Item Name: Step Assembly, Low Short LH

Start Date: 7/31/2017

Required Date: 7/31/2017

Start Qty: 1.00

Required Qty: 1.00

MS20600-AD4W4

Purchased

No

180

Each

1,159.000

12

12

MS20600-AD4W4

**

DL 2017-07-25

Rivet

Location

Loc Qty

Loc Code

CCK004

511

B137587 → 12

M135704

11

M137820

500

ST308

273

M137587

273

WA003

375

M135442

204

M136986

108

M137412

63

DQA: _____ Date: _____

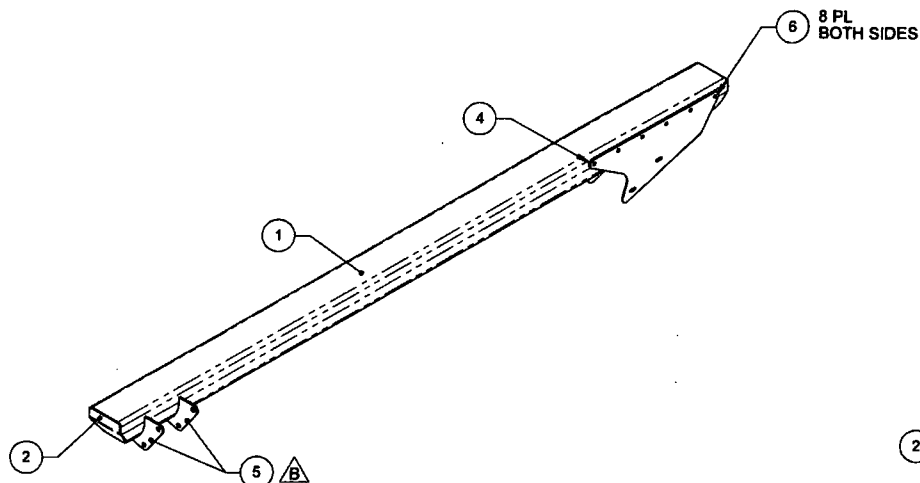
**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐									
Date : _____		Step #: _____			QTY Effective : _____				MRB (QSI042) Approval				
Description Work Order Deviation					Disposition					Completed By			
										Lead hand / Supervisor Approval Verification			
										QC / QA Coordinator Approval			
Root Cause					FAULT CATEGORY								
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____										
Misidentified ☐	☐	Past Due ☐											

ITEM	QTY -041	P/N	DESCRIPTION
	X	D3168-041	STEP ASSEMBLY, LOW SHORT (LH)
1	1	D2622-058	STEP EXTRUSION
2	2	D3067-1	END PLATE
3	2	D3077-1	STEP LEG
4	2	D3170-1	SPACER
5	2	D3219-5	PLATE
6	12	MS20600AD4W4	RIVET, BLIND



D3168-041 STEP ASSEMBLY, LOW SHORT (LH)

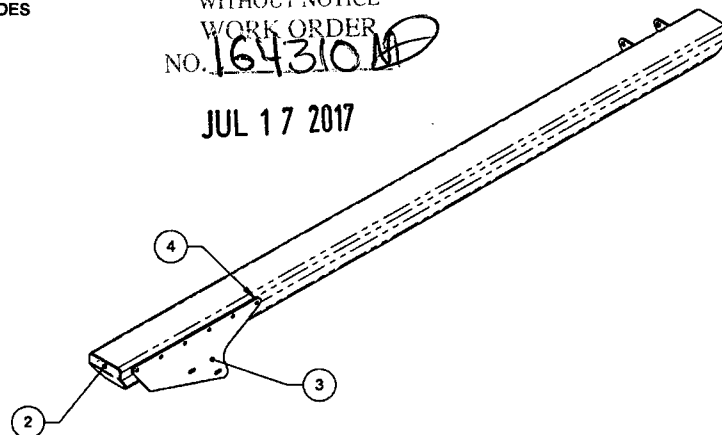
NOTES:

- 1) MATERIAL: NONE
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY PER QSI 044
- 7) WEIGHT: 5.03 lbs
- 8) WELD PER DART QSI 004
- 9) APPLY BLACK ANTI-SKID PAINT ON THE TOP SURFACE TO THE BOTTOM
OF THE TOP RADII AS SHOWN PER DART QSI 005 4.4

RELEASED
2016-03-14
EN 16-456

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WITHOUT NOTICE
WORK ORDER
NO. 164310M

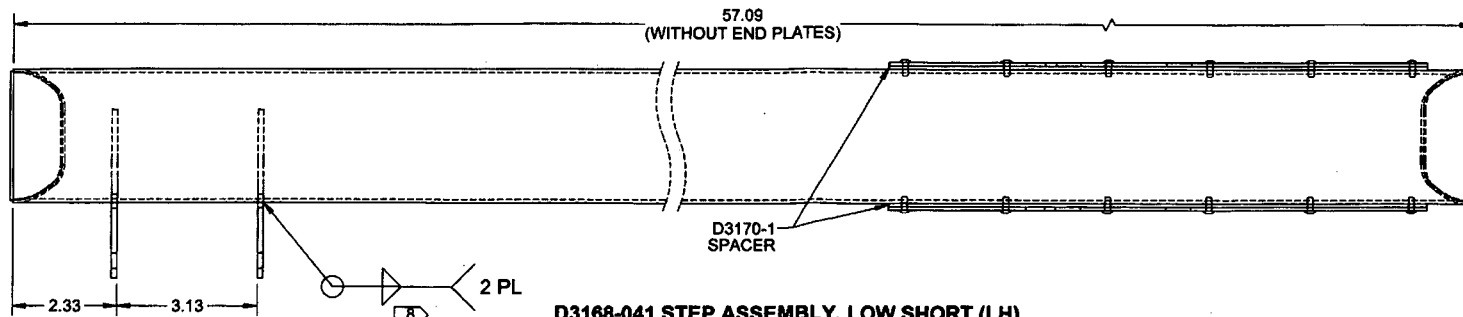
JUL 17 2017



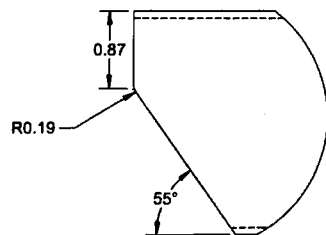
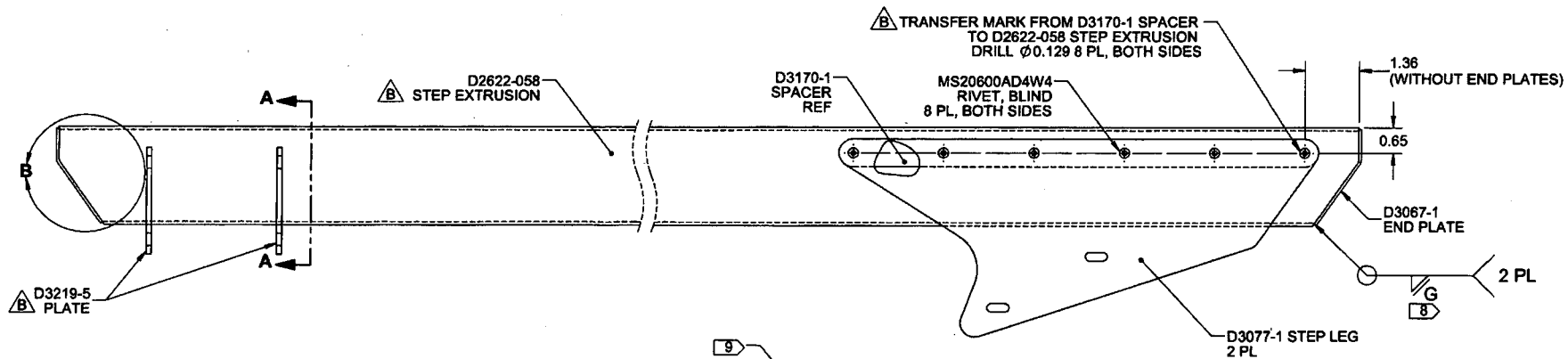
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A	NEW ISSUE	CP	02.09.11
REV.	DESCRIPTION	BY	DATE
DESIGN	CP		
DRAWN	AJS		
CHECKED	ML		
MFG. APPR.	JLM		
APPROVED	WM		
DE APPR.	DS		
DATE	15.11.10		
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			REV. B SHEET 1 OF 4 SCALE NTS

APPROVED

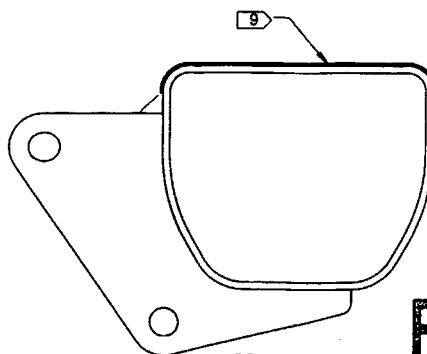
8 7 6 5 4 3 2 1



D3168-041 STEP ASSEMBLY, LOW SHORT (LH)



DETAIL B
2 PL, SCALE 2X
D3067-1 END PLATE NOT SHOWN



SECTION A-A

RELEASED
2016-03-14

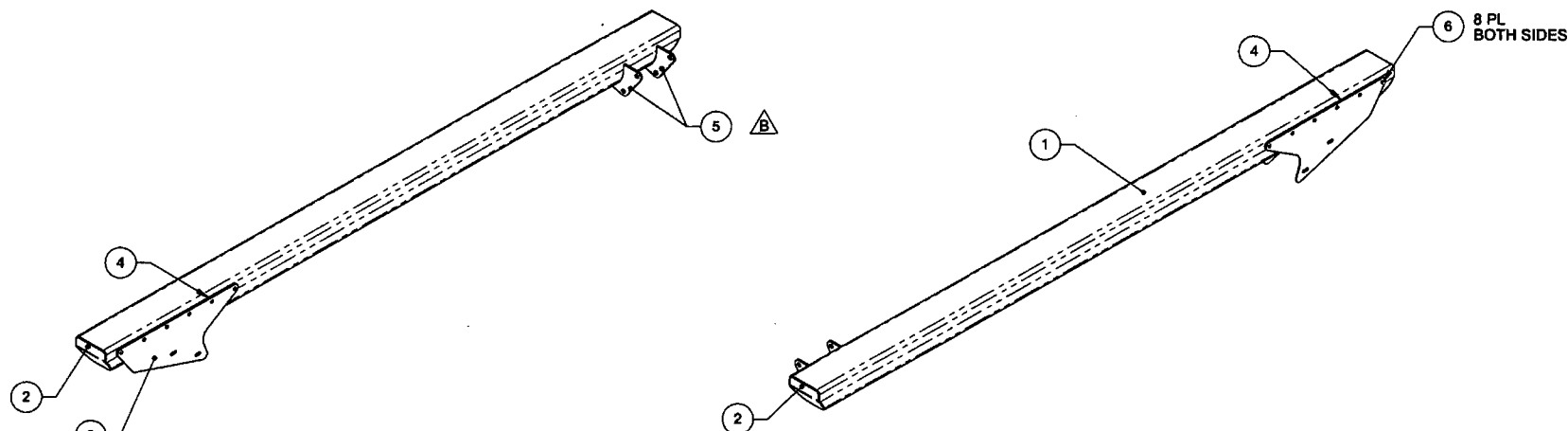
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DESIGN	CP
DRAWN	AJS
CHECKED	ML
MFG. APPR.	JLM
APPROVED	WM
DE APPR.	DS
DATE	15.11.10

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D3168	REV. B
TITLE STEP ASSEMBLY, LOW SHORT	SCALE NTS
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8 7 6 5 4 3 2 1

ITEM	QTY -042	P/N	DESCRIPTION
	X	D3168-042	STEP ASSEMBLY, LOW SHORT (RH)
1	1	D2622-058	STEP EXTRUSION
2	2	D3067-1	END PLATE
3	2	D3077-1	STEP LEG
4	2	D3170-1	SPACER
5	2	D3219-5	PLATE
6	12	MS20600AD4W4	RIVET, BLIND



D3168-042 STEP ASSEMBLY, LOW SHORT (RH)

NOTES:

- 1) MATERIAL: NONE
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY PER QSI 044
- 7) WEIGHT: 5.03 lbs
- 8) WELD PER DART QSI 004
- 9) APPLY BLACK ANTI-SKID PAINT ON THE TOP SURFACE TO THE BOTTOM
OF THE TOP RADII AS SHOWN PER DART QSI 005 4.4

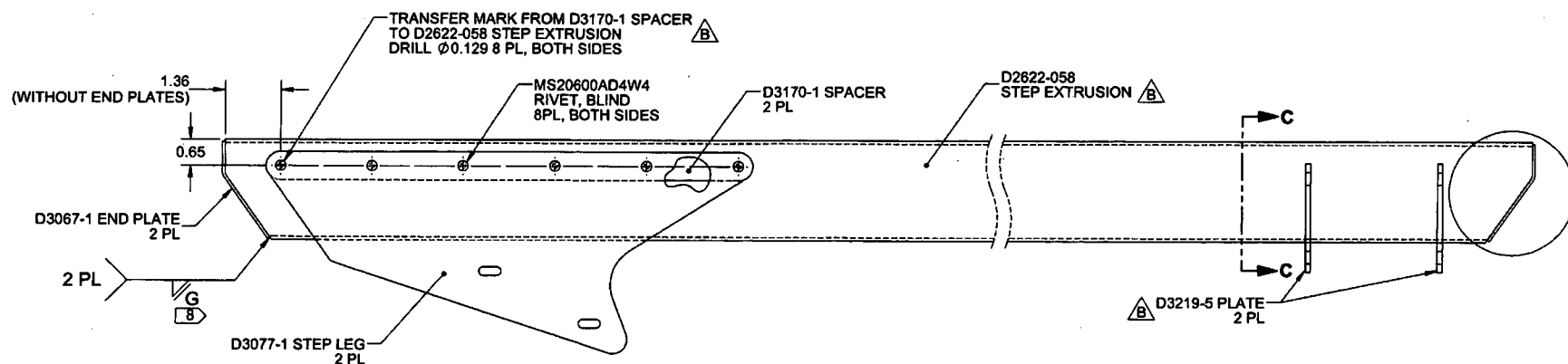
RELEASED
2016-03-14

APPROVED

DESIGN	CP
DRAWN	AJS
CHECKED	ML
MFG. APPR.	JLM
APPROVED	WM
DE APPR.	DS
DATE	15.11.10

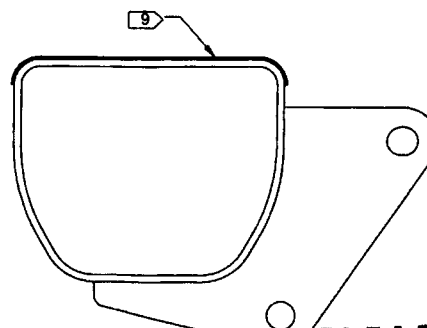
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D3168	REV. B
TITLE STEP ASSEMBLY, LOW SHORT	SHEET 3 OF 4
SCALE NTS	
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D3168-042 STEP ASSEMBLY, LOW SHORT (RH)



DETAIL D
2 PL, SCALE 2X
D3067-1 END PLATE NOT SHOWN

SECTION C-C



DESIGN	CP	DART AEROSPACE LTD	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ML	DRAWING NO.	REV. B
MFG. APPR.	JLM	D3168	SHEET 4 OF 4
APPROVED	WM	TITLE	SCALE
DE APPR.	DS	STEP ASSEMBLY, LOW SHORT	NTS
DATE	15.11.10	COPYRIGHT © 2002 BY DART AEROSPACE LTD	
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2015-03-14